

CLAIMSWhat Is Claimed Is:

- 1 1. A surface mount electrical component assembly comprising:
2 a retainer comprising a retaining base having on opening and an annular collar around
3 said opening;
4 an electrical component retained in the annular collar of said retainer, said electrical
5 component having a plurality of electrical leads thereon; and
6 a plurality of conductive ends connected to the bottom of said retaining base, said
7 conductive ends adapted to receive said electrical leads for electrical connection to said
8 electrical component.
- 1 2. The surface mount electrical component assembly of claim 1 wherein each of said
2 plurality of conductive ends comprises a conductive pad.
- 1 3. The surface mount electrical component assembly of claim 1 wherein said annular
2 collar has external threading.
- 1 4. The surface mount electrical component assembly of claim 3 further comprising a
2 retaining cap.
- 1 5. The surface mount electrical component assembly of claim 4 wherein said retaining
2 cap has internal threading.

- 1 6. The surface mount electrical component assembly of claim 1 wherein said annular
2 collar is made of a stiff resilient insulator.
- 1 7. The surface mount electrical component assembly of claim 6 wherein said annular
2 collar is made of rubber.
- 1 8. The surface mount electrical component assembly of claim 1 further comprising
2 means for enhancing the retention of the electrical component in said annular collar.
- 1 9. The surface mount electrical component assembly of claim 8 wherein said means for
2 enhancing the retention of the electrical component is a series of ribs.
- 1 10. The surface mount electrical component assembly of claim 1 further comprising a
2 plurality of non-conductive pads connected to the bottom of the retaining base for
3 connection to a printed circuit board.
- 1 11. The surface mount electrical component assembly of claim 1 wherein said conductive
2 ends are molded to the retaining base.
- 1 12. The surface mount electrical component assembly of claim 1 wherein said conductive
2 ends have crimped outer portions for gripping the periphery of said retaining base.

1 13. The surface mount electrical component assembly of claim 12 wherein said retaining
2 base has a circular shape and includes a pair of elevated stops at diametrically
3 opposed positions thereon, and wherein the crimped outer portions of the conductive
4 ends grip the retaining base between said elevated stops.

1 14. The surface mount electrical component assembly of claim 13 wherein said elevated
2 stops are tapered to permit the retainer to be locked through rotation in either a
3 clockwise or counterclockwise direction.

1 15. The surface mount electrical component assembly of claim 1 wherein said plurality
2 of conductive ends are opposite ends of a strip comprising the two conductive ends
3 separated by an insulating area.

1 16. A surface mount electrical component assembly comprising:
2 a hollow retainer comprising a base portion with an opening thereon and a cylindrical
3 portion having a closed end opposite the opening;
4 an electrical component within said retainer, said electrical component having a
5 plurality of electrical leads extending therefrom; and
6 a plurality of conductive ends mounted to said base portion and adapted to receive
7 said electrical leads in area of the opening.

- 1 17. The surface mount electrical component assembly of claim 16 wherein each of said
2 plurality of conductive ends comprises a conductive pad.
- 1 18. The surface mount electrical component assembly of claim 16 further comprising
2 means for enhancing the retention of the electrical component in said hollow retainer.
- 1 19. The surface mount electrical component assembly of claim 18 wherein said means
2 for enhancing the retention of the electrical component is a resilient filler material.
- 1 20. The surface mount electrical component assembly of claim 19 wherein said resilient
2 filler material is selected from the group consisting of elastic filler, foam rubber,
3 silicone, and urethane elastomer.
- 1 21. The surface mount electrical component assembly of claim 18 wherein said means
2 for enhancing the retention of the electrical component is radially extending ribs.
- 1 22. The surface mount electrical component assembly of claim 18 wherein said means
2 for enhancing the retention of the electrical component is a cantilevered arm.
- 1 23. The surface mount electrical component assembly of claim 16 further comprising a
2 plurality of non-conductive pads connected to the bottom of the base portion for
3 connection to a printed circuit board.

- 1 24. The surface mount electrical component assembly of claim 16 wherein said
2 conductive ends are molded to the base portion.
- 1 25. The surface mount electrical component assembly of claim 16 wherein said
2 conductive ends have crimped outer portions for gripping the periphery of said base
3 portion.
- 1 26. The surface mount electrical component assembly of claim 25 wherein said base
2 portion has a circular shape and includes a pair of elevated stops at diametrically
3 opposed positions thereon, and wherein the crimped outer portions of the conductive
4 ends grip the base portion between said elevated stops.
- 1 27. The surface mount electrical component assembly of claim 26 wherein said elevated
2 stops are tapered to permit the retainer to be locked through rotation in either a
3 clockwise or counterclockwise direction.
- 1 28. The surface mount electrical component assembly of claim 16 wherein each of said
2 conductive ends has a hole therein, and wherein the base portion includes a plurality
3 of protruding bosses inserted in said holes.

1 29. The surface mount electrical component assembly of claim 16 wherein said plurality
2 of conductive ends are opposite ends of a strip comprising the two conductive ends
3 separated by an insulating area.

1 30. A printed circuit board for mounting a surface mount electrical component, said
2 circuit board comprising:
3 a plurality of conductive ends in electrical connection with said circuit board, said
4 ends having electrical connectors adapted to receive electrical leads from said surface mount
5 electrical component;
6 a retainer comprising a retaining base having an opening and an annular collar around
7 said opening; and
8 wherein said plurality of conductive ends are connected to the bottom of said
9 retaining base, and wherein said electrical connectors of said conductive ends are adapted to
10 receive said electrical leads in the area of said opening.

1 31. The printed circuit board of claim 30 wherein each of said plurality of conductive
2 ends comprises a conductive pad.

1 32. The printed circuit board of claim 30 wherein said annular collar has external
2 threading.

1 33. The printed circuit board of claim 30 further comprising a retaining cap.

- 1 34. The printed circuit board of claim 33 wherein said retaining cap has internal
2 threading.
- 1 35. The printed circuit board of claim 30 wherein said annular collar is made of a stiff
2 resilient insulator.
- 1 36. The surface mount electrical component assembly of claim 35 wherein said annular
2 collar is made of rubber.
- 1 37. The printed circuit board of claim 30 further comprising means for enhancing the
2 retention of the electrical component in said annular collar.
- 1 38. The printed circuit board of claim 37 wherein said means for enhancing the retention
2 of the electrical component is a series of ribs.
- 1 39. The printed circuit board of claim 30 further comprising a plurality of non-conductive
2 pads connected to the bottom of the retaining base for connection to the printed
3 circuit board.
- 1 40. The printed circuit board of claim 30 wherein said conductive ends are molded to the
2 retaining base.

1 41. The printed circuit board of claim 30 wherein said conductive ends have crimped
2 outer portions for gripping the periphery of said retaining base.

1 42. The printed circuit board of claim 30 wherein said plurality of conductive ends are
2 opposite ends of a strip comprising the two conductive ends separated by an
3 insulating area.

1 43. A surface mount electrical component assembly comprising:
2 a retainer, comprising a retaining base having an opening and an annular collar
3 around said opening, for retaining an electrical component in the annular collar of said
4 retainer; and
5 a plurality of conductive ends, connected to the bottom of said retaining base, for
6 creating an electrical connection to an electrical component.

1 44. The surface mount electrical component assembly of claim 43 further comprising an
2 electrical component.

1 45. The surface mount electrical component assembly of claim 43 wherein each of said
2 plurality of conductive ends comprises a conductive pad.

1 46. The surface mount electrical component assembly of claim 43 wherein the electrical
2 component is a capacitor.

1 47. The surface mount electrical component assembly of claim 43 wherein the electrical
2 component is a surface mount crystal.

1 48. The surface mount electrical component assembly of claim 43 wherein the electrical
2 component is a resonator.

1 49. The surface mount electrical component assembly of claim 43 wherein the electrical
2 component is a choke.

1 50. The surface mount electrical component assembly of claim 43 wherein the electrical
2 component is an inductor.

1 51. The surface mount electrical component assembly of claim 43 wherein said annular
2 collar has external threading.

1 52. The surface mount electrical component assembly of claim 51 further comprising a
2 retaining cap.

- 1 53. The surface mount electrical component assembly of claim 52 wherein said retaining
2 cap has internal threading.
- 1 54. The surface mount electrical component assembly of claim 43 wherein said annular
2 collar is made of a stiff resilient insulator.
- 1 55. The surface mount electrical component assembly of claim 54 wherein said annular
2 collar is made of rubber.
- 1 56. The surface mount electrical component assembly of claim 43 further comprising
2 means for enhancing the retention of an electrical component in said annular collar.
- 1 57. The surface mount electrical component assembly of claim 56 wherein such means
2 for enhancing the retention of the electrical component is a series of ribs.
- 1 58. The surface mount electrical component assembly of claim 43 further comprising a
2 plurality of non-conductive pads connected to the bottom of the retaining base for
3 connection to a printed circuit board.
- 1 59. The surface mount electrical component assembly of claim 43 wherein said
2 conductive ends are molded to the retaining base.

1 60. The surface mount electrical component assembly of claim 43 wherein said
2 conductive ends have crimped outer portions for gripping the periphery of said
3 retaining base.

1 61. The surface mount electrical component assembly of claim 60 wherein said retaining
2 base has a circular shape and includes a pair of elevated stops at diametrically
3 opposed positions thereon, and wherein the crimped outer portions of the conductive
4 ends grip the retaining base between said elevated stops.

1 62. The surface mount electrical component assembly of claim 61 wherein said elevated
2 stops are tapered to permit the retainer to be locked through rotation in either a
3 clockwise or counterclockwise direction.

1 63. The surface mount electrical component assembly of claim 43 wherein said plurality
2 of conductive ends are opposite ends of a strip comprising the two conductive ends
3 separated by an insulating area